

CLAIMS

1. Use of a polynucleotide fragment comprising the PKC $\gamma$  gene encoding the type 1 subtype of protein kinase C in the manufacture of a medicament for treating a neurodegenerative disorder.

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2. Use of a polynucleotide fragment according to claim 1 wherein the medicament is used to treat mammals.

3. Use of a polynucleotide fragment according to claim 10 1 wherein the medicament is used to treat humans.

*John Al* 4. Use of a polynucleotide fragment according to any preceding claim wherein the degenerative disorder is a degenerative disorder of the central nervous system.

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5. Use of a polynucleotide fragment according to claim 4 wherein the degenerative disorder of the central nervous system is Alzheimer's Disease.

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6. Use of a polynucleotide fragment according to claim 4 wherein the degenerative disorder of the central nervous system is associated with dopaminergic cell degeneration.

7. Use of a polynucleotide fragment according to claim 25 4 wherein the degenerative disorder of the central nervous system is a neurodegenerative disorder associated with movement impairment.

*Sub A2* 8. Use of a polynucleotide fragment according to either of claims 6 or 7 wherein the neurodegenerative disorder is selected from the group comprising Parkinson's Disease, Huntington's Disease/Chorea, Dementia with Lewy bodies, Multiple-system atrophy, Progressive supranuclear palsy, cortical-basal ganglionic (corticobasal) degeneration, vascular Parkinsonism and ballism.

9. Use of a polypeptide comprising protein kinase c type 1 in the manufacture of a medicament for treating a neurodegenerative disorder.

10. Use of a polypeptide according to claim 9 wherein the medicament is used to treat mammals.

15 11. Use of a polypeptide according to claim 9 wherein the medicament is used to treat humans.

*Sub A3* 12. Use of a polypeptide according to any of claims 9 to 11 wherein a degenerative disorder is a degenerative disorder of the central nervous system.

13. Use of a polypeptide according to claim 12 wherein the degenerative disorder of the central nervous system is Alzheimer's Disease.

14. Use of a polypeptide according to claim 12 wherein the degenerative disorder of the central nervous system is associated with dopaminergic cell degeneration.

15. Use of a polypeptide according to claim 12 wherein  
5 the degenerative disorder of the central nervous system is a neurodegenerative disorder associated with movement impairment.

*Sub A45*  
16. Use of a polypeptide according to either of claims  
10 14 or 15 wherein the neurodegenerative disorder is selected from the group comprising Parkinson's Disease, Huntington's Disease/Chorea, Dementia with Lewy bodies, Multiple-system atrophy, Progressive supranuclear palsy, cortical-basal ganglionic (corticobasal) degeneration, vascular Parkinsonism  
15 and ballism.

17. Use of a polypeptide according to any of claims 9 to 16 wherein the polypeptide is synthetic.

20 18. A method of testing an animal thought to have a neurodegenerative disorder comprising detecting the presence of mutation in the PKC $\gamma$  gene or its associated promoter.

25 19. A method of testing an animal thought to be predisposed to having a neurodegenerative disorder comprising detecting the presence of mutation in the PKC $\gamma$  gene or its associated promoter.

*JGAS* 20. A method according to either of claims 18 or 19 wherein the animal is a mammal.

21. A method according to claim 20 wherein the mammal is a human.

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*JGAS* 22. A method according to either of claims 18 and 19 wherein the neurodegenerative disorder is a degenerative disorder of the central nervous system.

10 23. A method according to claim 22 wherein the degenerative disorder of the central nervous system is Alzheimer's Disease.

15 24. A method according to claim 22 wherein the degenerative disorder of the central nervous system is associated with dopaminergic cell degeneration.

20 25. A method according to claim 22 wherein the degenerative disorder of the central nervous systems is a neurodegenerative disorder associated with movement impairments.

*JGAT* 26. A method according to either of claims 24 or 25 wherein the neurodegenerative disorder is selected from the group comprising Parkinson's Disease, Huntington's Disease/Chorea, Dementia with Lewy bodies, Multiple-system atrophy, Progressive supranuclear palsy, cortical-basal

ganglionic (corticobasal) degeneration, vascular Parkinsonism and ballism.

27. A method according to either of claims 18 or 19 wherein the mutation results in a truncated product from the  
5 PKC $\gamma$  gene being produced.

28. A method according to claim 27 wherein the mutation occurs in the 5' half of the gene.

10 29. A method according to claim 28 wherein the mutation is a point mutation at position 841 of the rat PKC $\gamma$  gene or a similar region of the PKC $\gamma$  gene from another species.

15 *File 66* 30. A method according to either of claims 18 or 19 wherein detection of the presence of the mutation in the PKC $\gamma$  gene is achieved by detecting altered levels of the mRNA transcripts or mRNA precursor.

20 31. A method according to either of claims 18 or 19 wherein the mutation in the PKC $\gamma$  gene is detected using antibodies raised to the truncated PKC type I polypeptide.

25 32. Use of a truncated PKC $\gamma$  polynucleotide fragment for promoting nervous system degeneration for the production of animal models.

33. Use of a limited PKC type I polypeptide for promoting nervous system degeneration for the production of animal models.

34. Use of a PKC $\gamma$  polynucleotide fragment encoding the 5 PKC type I polypeptide for preventing, delaying, treating or inhibiting degeneration of nervous system.

35. Use of a PKC type I polypeptide for preventing, delaying, treating or inhibiting degeneration of nervous 10 system.

36. A polynucleotide fragment encoding the PKC type I polypeptide for use in gene therapy.

37. Use of a PKC $\gamma$  type I polypeptide for the 15 identification of compounds for use in the treatment of neurodegenerative disorders.

38. An antibody specific for an epitope(s) located on 20 a truncated polypeptide produced from the PKC $\gamma$  gene.

39. An antibody according to claim 38 wherein the epitope(s) is/are located in the C terminal half of the PKC type I polypeptide.

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40. An antibody according to claim 42 wherein the C terminal half of the polypeptide begins at amino acid number 282 and ends at the C terminus of the native polypeptide.

*Syfa 9* 41. An antibody according to any of claims 38 to 40  
5 wherein the antibody is a monoclonal antibody.

42. The monoclonal antibody according to claim 41  
wherein the monoclonal antibody has been humanised.

*Syfa 10* 43. Use of an antibody according to claims 38 - 42 for  
the manufacture of a medicament for preventing, delaying,  
treating or inhibiting degeneration of the nervous system.

15 44. Use of an antibody according to claims 38 - 42 in  
a diagnostic assay for testing an human thought to have or  
be predisposed to having a neural degenerative disorder.

20 *Ans a 11*  
*Alost*